

FOAM COMPOSITE INSULATION FOR AIRCRAFT

Abstract

Insulation for use in an aircraft fuselage is formed wherein at least one layer made from an open-celled foam that provides acoustic and thermal insulation. The open-celled foam is compression fitted into the airplane fuselage so as to provide effective attachment to the fuselage. The open-celled foam requires minimal attachment treatments. Further, compression fit of the open cell layer is used as an interface around brackets and unrelated hardware to provide superior close-out of gaps that would normally occur using traditional insulation to bracket interfaces. The preferred foam for the open celled compression layer is also relatively moisture resistant (i.e. hydrophobic) in nature and is compressible to between about 0.5 and 10 percent compression, with about 2% compression being ideal for most applications.